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We claim:

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- 1. A targeting construct comprising:
 - (a) a first polynucleotide sequence homologous to a 5-HT-2B gene;
- (b) a second polynucleotide sequence homologous to the 5-HT-2B gene; and
 - (c) a selectable marker.
 - 2. The targeting construct of claim 1, wherein the targeting construct further comprises a screening marker.
 - 3. A method of producing a targeting construct, the method comprising:
- 10 (a) providing a first polynucleotide sequence homologous to a 5-HT-2B gene;
 - (b) providing a second polynucleotide sequence homologous to the 5-HT-2B;
 - (c) providing a selectable marker; and
 - (d) inserting the first sequence, second sequence, and selectable marker into a vector, to produce the targeting construct.
- 15 4. A method of producing a targeting construct, the method comprising:
 - (a) providing a polynucleotide comprising a first sequence homologous to a first region of a 5-HT-2B gene and a second sequence homologous to a second region of a 5-HT-2B gene;
 - (b) inserting a positive selection marker in between the first and second sequences to form the targeting construct.
 - 5. A cell comprising a disruption in a 5-HT-2B gene.
 - 6. The cell of claim 5, wherein the cell is a murine cell.
 - 7. The cell of claim 6, wherein the murine cell is an embryonic stem cell.
 - 8. A non-human transgenic animal comprising a disruption in a 5-HT-2B gene.
- 25 9. A cell derived from the non-human transgenic animal of claim 8.
 - 10. A method of producing a transgenic mouse comprising a disruption in a 5-HT-2B gene, the method comprising:
 - (a) introducing the targeting construct of claim 1 into a cell;
 - (b) introducing the cell into a blastocyst;
- 30 (c) implanting the resulting blastocyst into a pseudopregnant mouse, wherein said pseudopregnant mouse gives birth to a chimeric mouse; and

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- (d) breeding the chimeric mouse to produce the transgenic mouse.
- 11. A method of identifying an agent that modulates the expression of a 5-HT-2B, the method comprising:
 - (a) providing a non-human transgenic animal comprising a disruption in a 5-HT-2B gene;
 - (b) administering an agent to the non-human transgenic animal; and
 - (c) determining whether the expression of 5-HT-2B in the non-human transgenic animal is modulated.
- 12. A method of identifying an agent that modulates the function of a 5-HT-2B, the method comprising:
 - (a) providing a non-human transgenic animal comprising a disruption in a 5-HT-2B gene;
 - (b) administering an agent to the non-human transgenic animal; and
 - (c) determining whether the function of the disrupted 5-HT-2B gene in the non-human transgenic animal is modulated.
 - 13. A method of identifying an agent that modulates the expression of 5-HT-2B, the method comprising:
 - (a) providing a cell comprising a disruption in a 5-HT-2B gene;
 - (b) contacting the cell with an agent; and
 - (c) determining whether expression of the 5-HT-2B is modulated.
 - 14. A method of identifying an agent that modulates the function of a 5-HT-2B gene, the method comprising:
 - (a) providing a cell comprising a disruption in a 5-HT-2B gene;
 - (b) contacting the cell with an agent; and
- 25 (c) determining whether the function of the 5-HT-2B gene is modulated.
 - 15. The method of claim 13 or claim 14, wherein the cell is derived from the non-human transgenic animal of claim 8.
 - 16. An agent identified by the method of claim 11, claim 12, claim 13, or claim 14.
- 17. A transgenic mouse comprising a disruption in a 5-HT-2B gene, wherein the transgenic mouse exhibits at least one of the following phenotypes: embryonic lethality, abnormal embryos, retarded development, and reabsorbed embryos.

- 18. The transgenic mouse of claim 17, wherein development is arrested at embryonic day 8.5.
- 19. The transgenic mouse of claim 17, wherein homozygous offspring are undetectable after embryonic day E8.5.
- 5 20. The transgenic mouse of claim 17, wherein homozygous embryos die between embryonic day 8.5 and embryonic day 9.5.
 - 21. The transgenic mouse of claim 17, wherein the wherein the embryos are reabsorbed between embryonic day 8.5 and embryonic day 9.5.
- A method of producing a transgenic mouse comprising a disruption in a 5-HT-2B gene, wherein the transgenic mouse exhibits at least one of the following phenotypes: embryonic lethality, abnormal embryos, retarded development, and reabsorbed embryos, the method comprising:
 - (a) introducing a 5-HT-2B gene targeting construct into a cell;
 - (b) introducing the cell into a blastocyst;
- 15 (c) implanting the resulting blastocyst into a pseudopregnant mouse, wherein said pseudopregnant mouse gives birth to a chimeric mouse; and
 - (d) breeding the chimeric mouse to produce the transgenic mouse comprising a disruption in a 5-HT-2B gene.
 - 23. A transgenic mouse produced by the method of claim 22.
- 20 24. A cell derived from the transgenic mouse of claim 17 or claim 23.
 - 25. A method of identifying an agent that ameliorates a phenotype associated with a disruption in a 5-HT-2B gene, the method comprising:
 - (a) administering an agent to a transgenic mouse comprising a disruption in a 5-HT-2B gene; and
- 25 (b) determining whether the agent ameliorates at least one of the following phenotypes: embryonic lethality, abnormal embryos, retarded development, and reabsorbed embryos.
 - 26. An agonist or antagonist of a 5-HT-2B receptor.
- 27. Phenotypic data associated with the transgenic mouse of claim 17 or claim 23, wherein the data is in a database.